WHAT IS CLAIMED IS:

1. A chemical processor comprising:

a chemical processing cup, in which a member-to-be-processed is to be provided; and

a pumping device for circulating a liquid chemical within said chemical processing cup:

wherein said member-to-be-processed has a surface-to-be-processed which is placed face up, said surface-to-be-processed is chemically processed while said liquid chemical is circulated along said surface-to-be-processed in substantially a given direction at all times and at a velocity gradient of 300/second or more.

2. The chemical processor according to claim 1, wherein said chemical processing cup has a chemical inlet port and a chemical drain port, and a regulation member capable of regulating an effective aperture area is provided at said chemical drain port.

3. The chemical processor according to claim 1, wherein a flow rate regulation plate opposing said surface-to-be-processed is provided in said chemical processing cup.

4. A chemical processing method comprising the steps of:

placing a member-to-be-processed having a plurality of blind holes formed in a surface-to-be-processed in a chemical processing cup such that said surface-to-be-processed is oriented upward;

chemically processing said surface-to-be-processed while a liquid chemical is circulated along said surface-to-be-processed in substantially a given direction at all times and at a velocity gradient of 300/second or more.

5. The method of processing a chemical according to claim 4, wherein said member-to-be-processed is a semiconductor wafer, and the insides of said blind holes are cleansed with said liquid chemical.

6. The method of processing a chemical according to claim 4, wherein said member-to-be-processed is a semiconductor wafer, and said blind holes are plated with said liquid chemical.

7. The method of processing a chemical according to claim 4, wherein an aspect ratio of said blind hole is 2 or less.

8. A method for manufacturing a semiconductor device comprising the steps of:

placing a semiconductor wafer having a plurality of blind holes formed in a surface-to-be-processed in a chemical processing cup such that said surface-to-be-processed is oriented upward;

chemically processing said surface-to-be-processed while a liquid chemical is circulated along said surface-to-be-processed in substantially a given direction at all times and at a velocity gradient of 300/second or more.

9. The method for manufacturing a semiconductor device according to claim 8, wherein the insides of said blind holes is cleansed while said semiconductor wafer is chemically processed.

10. The method for manufacturing a semiconductor device according to claim 8, wherein said blind holes are plated while said semiconductor wafer is chemically processed.

11. The method of manufacturing a semiconductor device according to claim 8, wherein an aspect ratio of said blind hole is 2 or less.